CERTAMEN MELASTOMATACEIS XV.

John J. Wurdack
U. S. National Herbarium, Smithsonian Institution

Under the auspices of the Smithsonian Research Foundation, five months were spent during the winter of 1969-70 in European herbaria working on various problems in neotropical melastomes. I am much indebted to the Old World taxonomic community (BM, BR, C, FI, G, K, LD, M, MA, OXF, P, S, SBT, W) for both scientific and social hospitality, as well as subsequent loans of selected materials. Without the generous assistance of numerous curators, the break-even point in publishable results (i.e., the number of already known taxonomic problems resolved equaling the total of both old and newly discovered ones unsettled) would not have been reached.

MACAIREA MAGUIREI Wurdack, sp. nov.

Ut videtur M. arirambae Huber affinis, ramulorum foliorum subtus inflorescentiarumque pilis erectis calycis lobis longioribus differt.

Ramuli sicut petioli foliorum venae primariae subtus inflorescentiaque dense setulosi pilis plerumque 1.2-1.8 mm longis basim versus expansis non glandulosis. Petioli 0.8-1.2 cm longi; lamina 3.5-7 X 1.5-3 cm elliptico-oblonga vel ovato-oblonga apice obtuso vel rotundato basi obtusa vel rotundata, rigida et robuste ciliolato-serrulata, supra modice bullulato-setulosa pilorum apicibus tenuibus 1.5-2 mm longis persistentibus, subtus dense appresso-setulosa pilorum basibus incrassatis et muriculatis, 3-nervata vel paulo 3-plinervata pari exteriore 1-2 mm inframarginali nervis secundariis supra invisis subtus paulo obscuris ca. 2 mm inter se distantibus nervulis ob pilos occultis. Panicula 7-12 cm longa multiflora, bracteis prominentibus ovalibus vel ellipticis ca. 1 cm longis caducis, bracteolis ellipticis 2-4 mm longis caducis, pedicellis 5-6 mm longis. Hypanthium 2.5-3 mm longum densiuscule laxeque strigosum pilis gracilibus ca. 1.5 mm longis; calycis tubus 0.2 mm longus, lobis lanceatis ca. 3.5 mm longis intus apicem versus sparse strigulosis extus modice strigulosis. Petala 9-10 X 7.5-8 mm apice subtruncato et ciliolato. Stamina dimorphica; filamenta 6.5-7 vel 3.5-4 mm longa apicem versus modice glanduloso-setulosa pilis 0.1-0.15 mm longis; antherarum thecae 3.2-3.4 X 0.25 mm, connectivis 1.8-2.5 vel 0.3-0.5 mm prolongatis, appendicibus 0.8 X 0.7 vel 0.5 X 0.5 mm. Stigma punctiforme; stylus sparse glanduloso-strigulosus; ovarium 4-loculare apicem versus modice glandulis sessilibus vel paullulo stipitatis armatum.

Type Collection: Bassett Maguire, J. J. Wurdack, & W. M. Keith 41800 (holotype US 2342590; isotypes NY, P), collected at edges of Sabana El Venado, left bank of Caño Pimichín 2 km above

Pimichín, Terr. Amazonas, Venezuela, elev. 120-140 m, 10 Oct. 1957. "Shrub 1-1.5 m. Petals pink."

Macairea arirambae has appressed pubescence and calyx lobes only ca. 2.5 mm long, as well as shorter upper leaf surface hairs. The Pimichín collection had been distributed as *Macairea* cf. *radula* (Bonpl.) DC.; that species, of which the holotype (*Ferreira s. n.*, P) has been examined, has longer (2.5-3 mm) mostly gland-tipped stem pubescence, 5-nerved leaves (the inner pair of primary veins 4-6 mm from the blade margins), and the hairs on the lower leaf surfaces gland-tipped and without expanded bases. Formerly I had thought that *M. radula* and *M. foveolata* Cogn. might be exactly synonymous; however, the latter species (known also from *Jobert 1232*, P-- "inter Theresina et Caxias," Maranhão-- perhaps collected on a joint trip with Schwacke) has the lower leaf surfaces only very sparsely strigose (albeit densely glandular-setulose) and longer rather more patent cauline hairs (3-5 mm, rather than 2.5-3 mm). The distinctness of the two species is still somewhat clouded, the Ferreira holotype being badly mildewed.

MACAIREA THERESIAE Cogn., Bot. Centralbl. 66: 369. 1896.

M. glabrescens Pilger, Verh. Bot. Ver. Brand. 47: 165. 1905.

Ule 6153 (G-DEL) is the same in all features as *Therese von Bayern s.n.* (M) except that Cogniaux' species has large stamens with connectives prolonged (below the thecae to the filament insertion) ca. 4 mm rather than 1-1.5 mm. Both types were collected in the same general region on the lower Rio Negro. Recent collections from the Manaos region show the same extremes, as well as intermediates, of connective prolongation.

SANDEMANIA HOEHNEI (Cogn.) Wurdack, comb. nov.

Comolia hoehnei Cogn., Comm. Linh. Tel. M. Grosso Ann. 5 Bot. pt. 3: 9. 1912.

Sandemania glandulosa Wurdack, Phytologia 5: 53. 1954.

Cogniaux originally placed his novelty in *Comolia* Sect. *Tricentrum*; however, Hoehne (Anex. Mem. Inst. But. 1, fasc. 5: 90. 1922) noted that the ovary was bilocular. A syntype examined of *C. hoehnei* (*Hoehne 1829*, BR) is quite compatible (the upper leaf surface at length glabrescent) with *Froes 22658*, *Egler & Raimundo 830* (Rio Cururú, Tapajós, Pará), and *Pires, Black, Wurdack, & Silva 6096* (Serra Cachimbo, Pará), all having glandular cauline pubescence. Two other Brazilian forms of *S. hoehnei* have recently been collected: *Prance et al 3732* and *4876* (Km. 202, Manaos-Itacoatiara Highway near Rio Urubú), with glabrous upper leaf surfaces and loosely appressed eglandular cauline hairs; *Egler & Raimundo 958* (Rio Cururú, Tapajós, Pará), with branchlets and primary leaf veins beneath sparsely strigulose (hairs eglandular, 0.3-0.5 mm long) and hypanthia essentially glabrous (very sparsely strigulose at the base). Since the Urubú form agrees vegetatively with photographs of *S. cogniauxii* (Ule) Wurdack, the Cururú collection is from the same region as typical material of *S. hoehnei*, and no Peruvian materials of *Sandemania* are at hand for another evaluation, no subspecific adjustments are now being made. It seems quite probable that all the collections of the genus represent variants of a wide-ranging monotype, the oldest available binomial being S. hoehnei.

TIBOUCHINA RHYNCHANTHERIFOLIA Cogn.

Recent Peruvian collections from Puno (Asalaya, Sandia, Vargas 14829; ....., Sandia, Vargas 16375) and Ayacucho (eastern massif of Cordillera Central opposite Cordillera Vilcabamba, Dudley 11831) have been identified (ex descr.) as T. rhynchantherifolia. The Puno specimens have a very few glandular hypanthial hairs, while the Ayacucho gathering has more abundant gland-tipped pubescence; both populations have the sepals sparsely puberulous within and the style setulose, features not noted in the original description.

TIBOUCHINA WEBERBAUERI Cogn.

After examining another "isotype" (G-DEL) of this species, I believe that the original collection was a mixture. The left-hand sprig of the destroyed Berlin sheet (Macbride Photo 16808) corresponds to my earlier interpretation (Phytologia 13: 67. 1966), while the right-hand branchlet as well as the G-DEL specimen are T. decora Gleason. Since the Cogniaux herbarium specimen (BR) also agrees with the 4-merous element (showing also a tendency in the larger leaves to plinervation, as well as sparser lower surface pubescence), it seems best to continue my previous interpretation rather than treating T. weberbaueri as a nomen confusum. Since both taxa need comparison with Bolivian species and the consequences of such a study are impalpable to me, no typification is now done.

TIBOUCHINA GEITNERIANA (Schlecht.) Cogn.

T. schumannii Cogn., DC. Mon. Phan. 7: 256. 1891.
T. moritziana Cogn., DC. Mon. Phan. 7: 259. 1891.

Cogniaux differentiated T. geitneriana and T. schumannii from all other congeners because of the 1-3 dorsal setulae on the connective at the filament juncture; these enations are more prominent on the Karsten collection. In all other respects, the types of the three taxa are alike. I feel that these setulae are abnormalities and am treating only one species for the Flora de Venezuela. Authentic collections have been examined for T. geitneriana (Geitner s. n., W), T. schumannii (Karsten s. n., BR), and T. moritziana (Karsten s. n., BR, Moritz 291 and 937). As might be inferred from the placement in Cogniaux' monograph, the interpretation of taxa in this part of the genus has extra-Venezuelan complications in both Central America (Mexico, Guatemala, Costa Rica) and the southern Andes (Peru, Bolivia), such ramifications needing extensive field observation of populations. No information about Geitner could be found in the standard references on collectors, perhaps the best suggestion (from J. Ewan) being that he may have been a German or Austrian businessman or consul.

ACIOTIS ANNUA (DC.) Triana

A. dysophylla (Benth.) Triana, Trans. Linn. Soc. Bot. 28: 52. 1871.

The two Martius collections at München both have narrowly oblong anthers 1-1.3 mm long; Cogniaux' description of *A. annua* in Flora Brasiliensis must have been drawn from insect-truncated anthers as so often happens in the melastomes. Otherwise, Cogniaux-cited specimens of *A. dysophylla* are quite compatible with *A. annua*. Among more recent collections, excellent matches for the Martius specimens are *C. F. Baker 133* and *Antonio Silva 92* from Brazil and *Wurdack & Adderley 43416* from Venezuela. Macbride's equation of *A. cordata* (Vell.) Macbride with *A. dysophylla* was inadvisable; the range of *A. annua* does not extend as far south as Vellozo's region. Many recent Peruvian collections cited in the Flora of Peru as *A. cordata* are referable to other species, especially *A. aequatorialis* Cogn. At München, I noted that *Spruce 338* is the same vegetatively as the Martius collections of *A. annua*, but the fruit are rather more distant (2-4 mm) on the inflorescence branchlets; *Spruce 2123* is not *A. annua*, having short dense glandular indument on the leaves and stems below the inflorescences.

ADELOBOTRYS PERMIXTA Wurdack, sp. nov.

A. adscendenti (Sw.) Triana et *A. rotundifoliae* Triana affinis, foliis maioribus crassioribus calycis dentibus exterioribus maioribus differt.

Caulis scandens primum sicut foliorum subtus venae primariae inflorescentia hypanthiaque modice caduceque strigulosa, pilis gracillimis asymmetrice malpigheis 0.2-0.4 mm longis. Petioli (1-)3-6 cm longi; lamina 10-20 X 6-13 cm, late ovato-elliptica vel elliptica apice breviter acuminato basi obtusa vel truncata, coriacea et integra vel obscure undulato-serrulata, dense subpersistenterque ciliata pilis gracillimis ca. 1.5 mm longis, 5(-7)-nervata nervis secundariis 0.5-0.8 cm inter se distantibus nervulis obscuris. Panicula laxe multiflora, pedunculo usque ad 20 cm longo, pedicellis ad anthesim 0.4-0.8 cm longis demum usque ad 1.5 cm longis. Hypanthium (ad torum) 5-6 mm longum paulo costulatum; calycis tubus 2-2.5 mm longus, lobis interioribus 0.7-1 mm longis late ovatis, dentibus exterioribus prominentibus robustis 1.3-2 mm eminentibus. Petala 10.5-11.5 X 6.5 mm obovato-oblonga apice truncato-rotundato. Stamina paulo dimorphica glabra; filamenta 7.5-8 mm longa aequalia; antherarum thecae 7.7-8 vel 6.5 X 0.7 mm subulatae, dente basali 0.7-0.9 mm longo robusto acuto, appendice adscendenti 3.6-3.7 mm libera apice per 1.2-1.6 mm caudato-bifido. Stigma non expansum; stylus glaber 11 X 0.35-0.4 mm; ovarium 5-loculare glabrum apice paulo (0.2-0.3 mm) emarginato; hypanthium fructiferum (ad torum) 10 mm longum.

Type Collection: *Albert S. Pinkus 35* (holotype US 1775924; isotypes widely distributed as *A. ciliata*), collected at Membaru Creek, upper Mazaruni River, British Guiana, 27 Sep. 1938. "Liana; petals and pistil white; anthers yellow."

Paratypes: British Guiana: *S. S. & C. L. Tillett 45522*, Kako River, upper Mazaruni River basin, elev. 500 m; *S. S. & C. L. Tillett 45636*, Akapai, Kamarang River, elev. ca. 470 m. Venezuela, Edo. Bolívar: *B. Maguire, J. A. Steyermark, & C. K. Maguire 46752* (fruiting), Alto Río Cuyuni 10-15 km below La Escalera, elev. 100 m.

Both suggested relatives have smaller thinner leaves, smaller flowers or fruit, and external calyx teeth not or scarcely projecting. *Adelobotrys praetexta* Pilger, with similar heavily ciliate leaves and flowers still unknown, has much smaller fruiting hypanthia and minute non-projecting external calyx teeth. Gleason (Brittonia 1: 140-141. 1932) had treated *A. permixta* as *A. ciliata* (Naud.) Triana; however, the holotype and recent French Guiana material of *A. ciliata* differ in the smaller thinner leaves with margins moderately (but somewhat caducously) appressed-ciliate with both stout whitish hairs (to 2 mm long) and very fine brown trichomes as well as the smaller flowers with external calyx teeth projecting only 0.5-1 mm. Collections of true *A. ciliata* are known from Venezuela (*Steyermark 89564*), Suriname (*Sagot 237*, *Kappler 1682*, *Cowan & Lindeman 39181*, *BW 6287*), and French Guiana (*Melinon s. n. ann. 1855*, *Melinon s. n. ann. 1867*, *Oldeman B-1099*).

Unfortunately Gleason's combination, *A. guianensis* (DC.) Gleason, seems to have been unnecessary, both the holotype (G-DC) and isotype (P) being typical *A. adscendens* (Sw.) Triana, with inframarginal external calyx teeth and stamens as dimorphic as in Jamaican collections; *Leprieur s. n. ann. 1847* is an excellent match for the Patris type. The treatment of the variants of *A. adscendens* (*Sarmentaria decora* Naudin, the holotype a fragmentary specimen with caducously fine-ciliolate leaves and very large fruit--the fruiting hypanthium 9-10 mm long, the calyx limb 2.5-3 mm long, the external calyx teeth inframarginal and less than 1 mm long; *A. multiflora* Pilger, with very small flowers) remains for a monographer; also among the British Guiana collections is a probable variant with slightly projecting external calyx teeth.

ADELOBOTRYS MARGINATA Brade

The Manaos collection (*Spruce s. n.*, "Macairea?," P, W) cited by Cogniaux as *A. fuscescens* Triana, is actually referable to *A. marginata*. The Chocó species may be distinguished by the denticulate leaves and much finer hypanthial pubescence. Two recent collections of *A. marginata* are *Prance, Pena, & Ramos 3111* (Manaus-Caracarai road, Amazonas, Brazil) and *Schultes, Rauffauf, & Soejarto 24052* (Leticia, Amazonas, Colombia).

AXINAEA OBLONGIFOLIA (Cogn.) Wurdack, comb. nov.

Meriania oblongifolia Cogn., DC. Mon. Phan. 7: 429. 1891.

Axinaea merianiae auct., non *Chastanaea merianiae* DC.

The Grisar holotype (P) and type fragments (BR) have been studied and are quite equatable with recent collections from southern Ecuador (Loja) and northern Peru (Piura), showing bulbous connective appendages. It is fortunate that the species was already described and the epithet available (vide infra).

AXINAEA MERIANIAE (DC.) Triana

A. lepidota (Benth.) Triana, Trans. Linn. Soc. Bot. 28: 69. 1871.

Chastanaea coriacea Naudin, Ann. Sci. Nat. ser. 3 Bot. 4: 55. 1845.

It was puzzling to find the fragment (G-DC) of A. merianiae with the squamate foliage of A. lepidota sensu Cogniaux, but this was dismissed as a collection mixup until the holotype and three other Bonpland specimens of Chastanaea merianiae were seen in Paris, all being the same as A. lepidota. The holotype of A. merianiae from Richard's herbarium has a hypanthium (dry) 5 mm long and calyx 2 mm long, instead of the shallow (1.5-2 mm long, dry) hypanthium (plus calyx 1-1.5 mm long) of A. oblongifolia. The plate published in Delessert's Icones Selectae Plantarum (vol. 5, pl. 2. 1846) is probably of A. oblongifolia, drawn according to Naudin's mistaken interpretation of A. merianiae.

CALYPTRELLA GRACILIS Triana

Miconia consimilis Pilger, Verh. Bot. Ver. Brand. 47: 170. 1905.

An isotype (Ule 6543, G-DEL) of Pilger's species has been examined. The current note is an extension of previous synonymy (Phytologia 9: 413. 1964).

LEANDRA PUBISTYLA Wurdack, nom. et stat. nov.

L. melastomoides Raddi var. paulina Cogn., Mart. Fl. Bras. 14(4): 85. 1886.

As previously indicated in the Melastomataceae of Santa Catarina (Sellowia 14: 177-178) and now confirmed by examination of Raddi collections (4 specimens, FI, G-DEL), L. melastomoides is not conspecific with Cogniaux' variety. The Raddi collections, however, are of the same species as L. scabra DC. (1828), this then being a synonym of L. melastomoides (1820). In the publication of L. scabra, L. melastomoides was cited with a query in the synonymy. Raddi later (1829) renamed L. melastomoides as L. involucrata Raddi (non DC., 1828), this name being doubly untenable (a homonym and superfluous). The other variants of L. melastomoides described in Flora Brasiliensis (var. longifolia Cogn., which perhaps might be construed as being var. melastomoides; var. major Cogn.) must necessarily be reevaluated in the future. The use of the epithet paulina was prempted in the Prodromus for a quite different species, L. paulina DC. No formal lectotype for L. pubistyla has been chosen, only a Sellow syntype being immediately at hand, but the species is amply represented also by modern collections.

Incidentally L. melastomoides best conforms to the original generic description (1820) and should be regarded as the generotype; the other species published then, L. hirta Raddi, has 5-merous (not, as mistakenly noted by Raddi, 6-merous) flowers. Raddi later (1829) modified the generic concept to encompass a miscellany, including species now placed in *Ossaea*, *Clidemia*, and *Miconia*. Among recent Brazilian collections, the Raddi material of *L. melastomoides* is best matched by *Fuad Atala 292* (Floresta de Tijuca, Guanabara), *Smith & Vieira 1378* (Corcovado, Guanabara), and *Wilkes s. n.* ("Rio Janeiro").

LEANDRA NIANGA (DC.) Cogn.

Raddi correctly made the combination, *L. agrestis* (Aubl.) Raddi for a rare French Guiana species. However, his own Brazilian collections (FI) identified by him as *L. agrestis* and the bases of his detailed description (Mem. Mod. 20: 157-158. 1829) are actually *L. nianga*.

LEANDRA REVERSA (DC.) Cogn.

The Raddi collection (FI) of *L. hirsutissima* Raddi (Mem. Mod. 20: 152. 1829) is actually identifiable with *L. reversa* sensu Cogniaux. Cogniaux had doubtfully placed *L. hirsutissima* in the synonymy of *L. australis* (Cham.) Cogn. Certainly however, judging from the Macbride photograph (25915) of *L. reversa*, ambiguity remains as to the correct use of this name; if *Clidemia reversa* DC. proves to be a synonym of *L. nianga* (DC.) Cogn. or one of its allies, Raddi's name will be the available one for the southeast Brazilian species with secund flowers.

LEANDRA ECHINATA Cogn., Mart. Fl. Bras. 14(4): 607. 1888.

L. horrida Cogn., DC. Mon. Phan. 7: 1185. 1891.

L. wettsteinii Rechinger, Denkschr. Kais. Akad. Wiss. Math.-Naturw. (Wien) 79: 255, pl. 22. 1908.

L. horrida Cogn. var. *reitzii* Brade, Sellowia 12: 143, pl. 4, fig. 1-7. 1960.

The above-cited synonymy has been confirmed by examination of type collections of *L. echinata* (*Glaziou XXI*, BR, which is the same collection as *Glaziou 16002*, C, P) and *L. wettsteinii* (W). *Glaziou 16002* is in bud, thus accounting for Cogniaux' small floral dimensions. The "Glaziou" type collection was actually made by Puiggari (*s. n.*) at Apiahy in May, 1886 and adopted into the Glaziou number sequence, with fallacious collection data of first "Pirecicaba, S. Paulo, 26 fevrier 1886" and later "Serra do Picu, R. Janeiro, 4 mai 1886"; Puiggari had earlier collected material at anthesis ("Apiahy, Sitio de João Coelho, Junio 1885," *Puiggari 3062*, P), but this collection was not seen by Cogniaux. On the Paris isosyntype of *L. horrida* (*Ule 1462*), Glaziou had written "1339" and "11254" (no altered locality indicated), but did not include this collection in his published "Liste". Brade's remarks (Sellowia 12: 143) about the affinity with *L. longisetosa* Cogn. raised the suspicion of still another synonym for *L. echinata*; however, examination of *Glaziou 8691* (P) showed that *L. longisetosa* is a distinct species with long-decurrent leaf blade bases. Apart from the materials cited in the Melastomataceae of Santa Catarina (Sellowia 14: 184. 1962, q. v. for floral details), *L. echinata* has recently been collected also in Paraná (Hatschbach 7104, 7156, 8670, 21682), the species thus ranging from southern São Paulo to Santa Catarina.

LEANDRA MICROPHYLLA Cogn.

Type fragments (BR) of both L. microphylla and L. dusenii Cogn. have been studied. In describing L. dusenii, Cogniaux did not mention the intimate affinity with L. microphylla. Apart from the difference in development of external calyx teeth, L. microphylla has the torus sparsely setulose within, the style glabrous, and the anthers relatively narrow and (usually) long (1.6-2 mm dry); L. dusenii has a glabrous torus, sparsely strigulose style, and plump anthers (1.2-1.4 mm dry). Both species have sparsely strigulose ovary apices, despite Cogniaux' description (L. dusenii). Recent collections of L. microphylla (some earlier determined by me as L. dusenii), all from Paraná, include Smith, Klein, & Hatschbach 14492 (Carambei, Mun. Castro; excellent match for the type), Hatschbach 14653 (Anfiteatro, Mun. P. Grossa), and Reitz & Klein 17462 (Rodovia de Café, Mun. Palmeira). For L. dusenii, recent topotypical specimens (Vila Velha, Mun. Ponta Grossa, Paraná) are Smith, Klein, & Hatschbach 14449 (excellent match for the type), Dombrowski, Saito, & Pereira 900, and Dusen 8063. While the cited specific differences seem striking, I am not at all sure that morphologic intermediates do not exist and indeed am hesitant about identifying several other collections in this microphyllous species-group. As implied in the synonymy under L. acutiflora (Naud.) Cogn. (Sellowia 14: 193. 1962), the later homonym L. dusenii Brade has no affinity with L. dusenii Cogn.

LEANDRA QUINQUEDENTATA (DC.) Cogn.

Triginia parviflora Jacques-Felix, Bull. Mus. Hist. Nat. Paris (2)8: 110. 1936.

Miconia africana Jacques-Felix, Bull. Mus. Hist. Nat. Paris (2)10: 642. 1938.

The Guiral holotype (P) is matched exactly by Vainio 33476 (US) from Carassa, Minas Gerais, Brazil, having finer leaf veinlet reticulation and smaller flowers than typical for L. quinquedentata; these differences from the typical form are bridged by the large series of other recent Brazilian collections. No information about the itinerary of the Guiral expedition could be found in Paris, Madrid, or London. Three possibilities concerning the Guiral collection exist: the collection is truly from Spanish Guinea and is another example of Afro-American disjuncts or represents an introduced waif; the labels were mixed in museum processing and the collection is actually from Brazil but from another collector; or the Guiral expedition actually visited Brazil, but the locality data on the type is incorrect. The first conjecture seems improbable to me because of the exact morphologic match found in truly Brazilian material and because Leandra species are unlikely and unknown otherwise as casual introductions anywhere.

Thus it still seems true that no genus (and no species) of Melastomataceae is native to both the New and Old Worlds, although of course *Tibouchina urvilleana* (DC.) Cogn., *Heterocentron subtriplinervium* (L. & O.) A. Braun & Bouché, and *Clidemia hirta* (L.) D. Don have become naturalized in parts of the palaeotropics.

LEANDRA DIVARICATA (Naud.) Cogn.

L. rhamnifolia (Naud.) Cogn. var. *macrodon* (Naud.) Cogn., Mart. Fl. Bras. 14(4): 195. 1886.

Examination of Naudin's holotype (P) has confirmed the synonymy suggested by Gleason in his melastome notebook. The Venezuelan collections of *L. divaricata* conform to the type collection, lacking gland-tipped hypanthial hairs. The hierarchal status of the Bahia element (*L. rhamnifolia*, the type of the typical variety perhaps a Sellow collection) in this complex has not been decided; as noted earlier (Mem. N. Y. Bot. Gard. 10, 5: 164-165. 1964), many British Guiana collections (but not the type) of *L. divaricata* show varying proportions (up to ca. 50%) of glandular hypanthial hairs, while Bahia collections essentially lack eglandular hypanthial pubescence. In both the Bahia and Suriname-Pará (Brazil) samples of *L. divaricata* and *L. rhamnifolia* are specimens with quite divaricate cauline and hypanthial trichomes. Also the type of *L. rhamnifolia* var. *grandifolia* Cogn., not matched in modern collections, has much finer hypanthial pubescence than the typical variety and would merit subspecific recognition.

The type collection (3 sheets, M) of *L. secundiflora* (DC.) Cogn. has been examined; my earlier allusion as to possible synonymy with *L. divaricata* does not seem warranted at present. The Martius collections differ in the linear to linear-lanceate (rather than narrowly oblanceate) bracteoles 4-5 (rather than 2-3) times longer than wide and the plump anthers less than 1 mm long (dry) and only 2-2.8 times as long as wide (rather than linear-oblong, 1.3-1.7 mm long, 4-5 times as long as wide); vegetatively the two species are not reliably distinguishable and both have 5-merous flowers (with glabrous 3-celled ovaries) despite Cogniaux' differentiation. Collections referable to *L. secundiflora* include the Martius collections (M) from "prov. R. Negri" (one labelled "Manacarú"), *Traill 257* (P) from "Jacatajuba, Santarem, R. Jutahi," and *Schultes & Cabrera 13636* (US) from Soratama, Río Apaporis, Colombia. Cogniaux' synonymy under *L. secundiflora* needs restudy, the Gay holotype (P) of *Clidemia quadrisulca* Naud. having 5-merous flowers (as indicated by Naudin) but very fine (in part gland-tipped) hypanthial pubescence and certainly not being conspecific with *L. secundiflora*.

LEANDRA ARISTIGERA (Naud.) Cogn.

After comparison with the holotype (P), two recent collections seem referable to this rarity: *Prance, Steward, Ramos, & Farias 9591*, Auaris, Terr. Roraima, Brazil; *Steyermark, Bunting,*

& Blanco 101738, Reserva Forestal San Camilo, Edo. Apure, Venezuela. Both collections have somewhat longer caducous hairs on the upper leaf surface than in Gay's specimen. Gay's collection surely is not from "prope Lima", but more probably from the lowlands of Depto. Cuzco, Peru. The three gatherings all differ from Schwacke 9812 (cited by Cogniaux) in the longer cauline and petiolar pubescence (ca. 2 mm rather than 1 mm); Jobert 756 (P), from "Potomayo (Amazone)", matches exactly the Schwacke material.

As noted in the original description, L. lasiopetala Cogn. is very closely related to L. aristigera, but has external calyx teeth projecting only ca. 0.3 mm (rather than 1-1.1 mm) and the external corolla mucro projecting only 0.2-0.4 mm (rather than 0.8-1.4 mm), as well as cauline pubescence only 0.3-0.5 mm long; recent collections of the Costa Rican species include Webster, Miller, & Miller 12410 (Río Sonador, Puntarenas), Schnell 14 (Volcán, San José), and Molina, Burger, Jimenez, & Wallenta 17992 (Río Convento, San José). Both species show "incipient" formicaria in the leaf blade bases. Unfortunately for my taxonomic equanimity, by the above criteria Schultes & Cabrera 15520 (Río Apaporis, Amazonas, Colombia) seems better as L. lasiopoda than as L. aristigera, while Schunke V.5874 (Rondos, Huánuco, Peru) has corolla mucros 1 mm long but short (ca. 0.4 mm) external calyx teeth and cordulate leaf bases. Perhaps there is only one wide-ranging species (with recognizable infraspecific permutants), but either more material or better taxonomic intuition is needed. The holotype (G-BOISS; Macbride photograph 34166) of L. boissieriana Cogn. has been examined; in floral features it agrees with the holotype of L. aristigera and is probably only a nearly glabrous (vegetatively) variant.

MICONIA JUCUNDA (DC.) Cogn.

Graffenrieda brevicalcarata Mgf., Notizbl. Bot. Gart. Berlin 10: 53. 1927.

A specimen of the type collection, Luetzelburg 341 (M), has been studied. Although collected in Bahia (the type locality of M. jucunda var. jucunda), the Luetzelburg material agrees better with M. jucunda var. selloana (Cham.) Cogn., matching well recent Paraná specimens (Hatschbach 5603). Martius also had mistakenly placed this species in the genus Graffenrieda as G. jucunda (DC.) Mart.

MICONIA DONAEANA Naud.

M. longicaudata Cogn., DC. Mon. Phan. 7: 738. 1891.

M. leucantha Gleason, Bull. Torrey Club 63: 534. 1936.

The species is somewhat variable in pedicel length, flower size, and development of connective glands; however, all this variability is encompassed within the numerous Costa Rican collections. The Peruvian population was characterized by the short pedicels, with the Pavón type showing connectives moderately gland-edged from the base up to about the half-point of the thecae; the Venezuelan type collection of M. longicaudata shows pedicels 1-3 mm long and the connective glabrous or very sparsely gland-edged basally. As here amplified, M. donaeana is known from Honduras (Molina 7131), Costa Rica (Hatheway 1697; Pittier 10611, 11063, 11955; Schnell 72; Skutch 2353, 2500, 3905, 4731; Tonduz 4952, 6873, 7577, 7612), Venezuela (both Coastal Cordillera and Andes: Bernardi 1772, 1965, 6250; Funck & Schlim 1503; Pittier 15526; Steyermark et al 89904, 94767, 101272), and subandean eastern Peru (see citations in Flora of Peru; also Schunke A118, Vargas 5339). Certainly M. caudata (Bonpl.) DC. is very closely related to M. donaeana, but has dense persistent pulverulence on the lower leaf surfaces and oblongish scarcely subulate anthers (although this latter feature is approached in some Costa Rican collections of M. donaeana); except perhaps for Tonduz 7801, M. caudata seems to be lacking from Costa Rica, but has been collected in Mexico (Chiapas, Shilom Ton 3878), Guatemala, and Panama (Chiriquí), as well as Colombia. No material referable to M. donaeana has been seen from either Colombia or Ecuador, the Ecuadorian analogue being M. littlei Wurdack.

MICONIA SYLVATICA (Schlecht.) Naud.

Acinodendron glandulosum O. Ktze., Rev. Gen. Pl. 1: 244. 1891.

Miconia glandulosa (O. Ktze.) R. Knuth, Fedde Rep. Beih. 43: 531. 1928, non M.? glandulosa (Sw.) Naud., Ann. Sci. Nat. ser. 3 Bot. 16: 244. 1851.

After several years' intermittent struggle with species 102-108 of Cogniaux' monograph and still no evident and practical complete solution, for purposes of the Flora de Venezuela I have partially copped out. Among these species, M. mendoncaei Cogn., a variant of M. prasina (Sw.) DC. with obtuse leaf bases (but plinerved leaves and small petals), and M. smithii Cogn. ex Gleason, actually Sect. Cremanium with biporose (or subquadriporose) anthers, may be excluded from consideration. The flower glomerules (usually triads) in the other taxa are actually on much shortened branchlets, generally giving the aspect of a panicle of racemes. At one end of the species-group spectrum in Central American M. sylvatica, these branchlets on the lower portions of the main branches reach 2-3 mm in length and the plants are lacking in simple leaf surface and inflorescence hairs; at the other end, the branchlets are 0.5 mm or less in length and the simple hairs are abundant. In species delimitation, certainly the treatment in the Flora of Guatemala is realistic for Central America, both M. bourgeana Cogn. and M. carioana Cogn. (the latter having sparse simple hairs on the lower leaf surface veinlets despite Cogniaux' implied distinction from M. bourgeana: Bernouilli & Cario 2868, BR) being synonymous with M. desmantha Benth. After noting the vegetative and floral resemblances of Acinodendron glandulosum to M. laevigata (L.) DC., a search among the Cogniaux-cited synonyms of the linnaeon uncovered a Schiede &

Deppe isotype of M. sylvatica (G-DEL, ex herb. Moricand). Schlechtendal's original description (Linnaea 13: 422. 1839) was very perceptive and indeed the distinction from M. laevigata is primarily in inflorescence pattern, the latter have secund spaced flowers on the ultimate inflorescence branchlets rather than a triad glomerule. Among Central American collections of M. sylvatica are: Balls 4305 (Orizaba, US), Berlandier 378 (Tampico-Real del Monte, G-DEL, P), Bilimek 153 (Orizaba, P), Botteri 477 (Orizaba, P), Bourgeau 2247, 2247 bis, 2248 (all "Vallée de Cordova", P), Ehrenberg s. n. (Jalapa, US), Galeotti 2905, 2910, 2923 (all Vera Cruz, G-DEL), Kerber 350 (Fortin, C, P), Liebmann 37 (US), 38 (P), 39 (Mirador, C), 40 (Mirador, C, P), Linden 603 (Jalapa, G-DEL) and 1291 (Mirador, Vera Cruz, G-DEL), Reiche 606 (Jalapa, M), Rose & Hay 6151 (Jalapa, US), Seler 924 (US), all from Mexico; Rojas 341 (US), from Chillaui, Guatemala; Standley 55858 (US), from Comayagua, Honduras; and Calderón 1180 (US) and Standley 23030 (US), from El Salvador.

Among the species at the hairy end of the morphologic spectrum, M. lindenii Naud. does not seem separable from M. aeruginosa Naud., the types of both taxa having essentially non-emergent external calyx teeth. The only "species" with emergent (0.4-1 mm) external calyx teeth, M. chaetodon Naud., generally also has longer cauline pubescence (2.5-3.5 mm long, but on the type only ca. 2 mm long) than in M. aeruginosa. I have not seen the collections of M. desmantha cited in the Flora of Trinidad and Tobago; probably they are similar to sporadic Venezuelan specimens (Gines 228, Killip 37833, Gehriger 404) which I am including in M. aeruginosa, these collections having sparser and usually shorter simple foliar hairs than in "typical" M. desmantha from Colombia. Perhaps the above display of analytic incompleteness will inspire detailed field observations in the Venezuelan Coastal Cordillera and a true sorting of the ecotypes; expediency and a distaste for transient new combinations are the only real defenses for the current treatment.

MICONIA SERIALIS DC.

M. tomentella Cogn., Mart. Fl. Bras. 14(4): 284. 1887.

The holotype of M. serialis (P), collected by Ferreira and annotated by A. P. de Candolle, also seen by Naudin (Ann. Sci. Nat. ser. 3 Bot. 16: 147. 1851) but not by Cogniaux, represents the same species later described by Cogniaux. Miconia serialis is known definitely from Suriname and French Guiana; I have also tentatively identified a post-mature fruiting collection (Steyermark 86890) from the Río Paragua, Bolívar, Venezuela as this species. Perhaps Ferreira's collection came from his trip to the upper Rio Branco drainage.

MICONIA LOURTEIGIANA Wurdack, sp. nov.

M. seriali DC. affinis, foliis bene petiolatis non plinervatis differt.

Frutex vel arbor parva 3-12 m; ramuli teretes sicut folia

subtus inflorescentia hypanthiaque indumento arachnoideo non discreto omnino occulti. Petioli 1-2.3 cm longi, basibus linea paulo elevata nodali connexis; lamina (8-)10-15(-20) X (3-)4-7 (-8.5) cm elliptica apice subgradatim acuminato basi acuta, submembranacea et essentialiter integra, supra glabra, 3-nervata (pari inframarginali tenui excluso) nervis secundariis plerumque 2.5-4 mm inter se distantibus nervulis subtus planis et dense reticulatis ob pilos occultis. Panicula 6-10 cm longa multiflora ramis primariis saepius bifurcatis; flores 5-meri secundi sessiles, bracteolis ca. 1 mm longis lanceatis persistentibus. Hypanthium (ad torum) ca. 1.7 mm longum; calycis tubus 0.2-0.3 mm longus, lobis interioribus 0.4-0.5 mm longis late triangularibus, dentibus exterioribus obscuris non eminentibus. Petala 2 X 1.4-1.7 mm alba minutissime granulosa obovato-oblonga apice rotundato. Stamina paulo dimorphica glabra; filamenta 1.5 mm longa; antherarum thecae 1.6-1.8 mm longae anguste oblongae apice paulo emarginato poro ventraliter inclinato; connectivum non vel vix (0.1 mm) prolongatum, appendice basali magna cordiformi vel trilobulata. Stylus glaber apicem versus expansus; stigma 0.7 mm diam.; ovarium 3-loculare $\frac{1}{2}$ inferum, apice glabro collo 0.2-0.3 mm alto.

Type Collection: *J. J. Wurdack 1919* (holotype US 2404359; 7 isotypes, distributed as *M. serialis*), collected on a ridge crest of Quebrada Chuivi (above Km 278 of Marañón road), valley of Río Marañón near Cascadas de Mayasi, Prov. Bagua, Depto. Amazonas, Peru, elev. 500-550 m, 10 Sep. 1962.

Paratypes: VENEZUELA. Apure: Reserva Forestal San Camilo, *J. A. Steyermark, G. S. Bunting, & C. Blanco 101449*. Bolívar: Río Paramichi, *J. A. Steyermark 90570*. COLOMBIA. Caquetá: Florencia, *J. Cuatrecasas & R. S. Cowan 27227*. PERU. Loreto: lower Río Huallaga, *Llewelyn Williams 3836* and *4718*; Yurimaguas, *Poeppig 2407B*, *Killip & Smith 27544*, *27948*, and *28077*, *Klug 36*; Mishuyacu, *Killip & Smith 29995*, *Klug 465*; Iquitos, *Sandeman 2250* and *2266*, *Killip & Smith 29857*, *Asplund 14031*. San Martín: Tocache, *Poeppig 1863*. Cuzco: Asunción, Paucartambo, *Vargas 11023*. Puno: San Govan, *Lechler 2467*. BRAZIL. Amazonas: Boca de Acre, *Prance, Pena, Ramos, & Videcki 2461*. Acre: Cruzeiro do Sul, *Prance, Pena, & Ramos 2745*; Sena Madureira, *Prance, Coelho, Ramos, & Farias 7569*. BOLIVIA. La Paz: Mapiri, *R. S. Williams 760* (distributed as *M. argyrophylla* DC.); San Bartolome near Calisaya, *Krukoff 10106*. Pando: Abuña, *Prance, Coelho, Ramos, & Farias 7569*.

While this belated description of a widely distributed species with no available synonyms is somewhat unfortunate for non-taxonomic bibliography, it is nonetheless pleasurable to honor Alicia Lourteig, who is the doyenne of neotropical taxonomy and history of collections in Paris, has forwarded the researches of innumerable visitors (including myself), and has demonstrated leonine courage (fortified by *la logique francaise*) in her own taxonomic efforts in nearly impossible plant families. *Miconia lourteigiana* was misinterpreted by Cogniaux as *M. serialis* (vide supra).

MICONIA APPENDICULATA Triana

The holotype of this Colombian species, Triana 4059, had long been filed at the British Museum (Natural History) under "M. macrotis Tr." (non M. macrotis Cogn.); however, in his collection notes, Triana had lined out his original unpublished epithet and substituted that under which the species was published, but did not do so on the specimen label. Two recent collections, Cuatrecasas 10586 (Puerto Porvenir, Río Putumayo, Com. Putumayo, 230-250 m elev., 17 Nov. 1940) and Perez Arbelaez 664 (Florencia, Caquetá, 420 m elev., XII-1930), especially the former, are comparable to Triana 4059. Miconia appendiculata is related to M. trinervia (Sw.) Don ex Loud. (M. scorpioides of Cogniaux' monograph), differing in the rather formless (squamate) early-caducous pubescence, the terete non-ancipital branches, the sessile leaves with cordate-auriculate bases and somewhat denser veinlet reticulation, and the not-at-all prolonged anther connectives (seen on the Cuatrecasas collection). Triana's excursions into the eastern lowlands of Colombia did not include the southeast; as yet I have seen no collections of M. appendiculata from the Villavicencio region where he did collect. Another species in this relationship (which also includes M. goudotii Naud. and ex char. M. paspaloides Gleason) is M. pterocaulon Triana, known from several recent Colombian and Venezuelan collections but artificially keyed by Cogniaux some 24 species away from this complex.

MICONIA AFFINIS DC.

M. microcarpa DC., Prodromus 3: 189. 1828.
M. planinervia Naudin, Ann. Sci. Nat. ser. 3 Bot. 16: 160. 1851.
M. cecidophora Naudin, Ann. Sci. Nat. ser. 3 Bot. 16: 166. 1851.
M. pusilliflora Beurl., Act. Holm 130. 1854 (non Naudin, 1851).
M. beurlingii Triana, Trans. Linn. Soc. Bot. 28: 107. 1871.
M. cayumbensis Gleason, Bull. Torrey Club 66: 416. 1939.

The two extremes in this complex differ only slightly in foliage and flower size. Miconia affinis and M. planinervia have leaf blades large, firm, oblong-elliptic, and very shortly blunt-acuminate and anther thecae (dry) 2.3-2.5 mm or 2 mm long; M. microcarpa, M. beurlingii, and M. cayumbensis (ovary 3-celled, not 2-celled as in the original description) have somewhat thinner elliptic and rather long-acuminate leaf blades and anther thecae (dry) 1.8-2 mm or 1.4-1.7 mm long; M. cecidophora is rather intermediate in foliar and floral features. Urban (Ark. Bot. 22A: 33. 1929) commented on the foliar and fruit extremes in naming Puerto Rican collections. The salient species features are the definite interpetiolar lines on the stellulate-puberulent branchlets, the caducously sparse-stellulate lower leaf surfaces with lax plane veinlets, the opposite inflorescence branches and branchlets, the stellulate-puberulous hypanthia and triangular calyx lobes, and slightly dimorphic stamens with the connective usually slightly (to 0.5 mm) prolonged below the larger thecae. I have seen type material of all the species synonymized under *M. affinis*.

Miconia affinis (only representative collections cited) ranges from Mexico (Vera Cruz, *J. V. Santos 2305*; Oaxaca, *Llewelyn Williams 9157* and *9400*), Guatemala (Izabel, *Standley 25058*; Alta Verapaz, *von Tuerckheim 8685*), British Honduras (Stann Creek, *Gentle 1917*; Toledo, *Gentle 4006*), Honduras (Atlantida, *Yuncker, Koepper, & Wagner 8306*; Cortes, *Williams & Molina 17948*), Nicaragua (Zelaya, *Molina 2385*; Bluefields, *Proctor, Jones, & Facey 27306*), Costa Rica (Puntarenas, *Allen 5881*; San José, *Skutch 4289*; Cartago, *Schnell 680*), Panama (San José Island, *Johnston 762*; Bocas del Toro, *von Wedel 2065*; Canal Zone, *Christopherson 205*; Darien, *Duke 15531*), and Puerto Rico to Colombia (Santander, *Uribe 4699*; Meta, *Appolinaire s. n.*; Putumayo, *Cuatrecasas 11286*; Amazonas, *Schultes 8171*; Chocó, *Killip 35042*), Venezuela (Zulia, Carabobo, Delta Amacuro, Bolívar), Trinidad, French Guiana (but strangely enough not British Guiana or Suriname), Brazil (Amapá, *Irwin 48678*, distributed as *M. prasina*; Pará, *Archer 7779*; Amazonas, *Krukoff 5998*; Acre, *Prance, Coelho, Ramos, & Farias 7708*; Rondonia, *Prance & Ramos 7158*), and Peru (Loreto, *Killip & Smith 27084* and *27936*, *Llewelyn Williams 3823* and *3839*; San Martín, *Belshaw 3442*; Huánuco; Junín; Madre de Díos, *Vargas 18829*).

Miconia egensis Cogn. and *M. panicularis* Gleason (which is perhaps synonymous with *M. egensis*) have rather the same aspect as M. affinis, but coarser cauline pubescence and often whorled inflorescence branchlets. Most of the material currently filed in herbaria as *M. hyperprasina* Naudin is actually *M. affinis*; Naudin's species is apparently a rare one, known to me only from southern Mexico, Guatemala (*von Tuerckheim 7624* and *8517*), and Costa Rica (*Tonduz 3755* and *4971*), and is distinguished by the lack of interpetiolar ridges on the branchlets, the very sparsely and caducously strigulose upper leaf surfaces, and the anther connectives bilobulate-thickened at the base. The material at hand of *M. nematophora* Urb. & Ekm. does not show flowers at anthesis; certainly the cauline and inflorescence pubescence is rather coarser than in *M. affinis*, but the foliar tips referred to in the specific epithet are not species-diagnostic. It is doubtful if the Bahia collection cited by Triana and Cogniaux under *M. cecidophora* is convarietal with the Castelnau type; this specimen has (ex Macbride photo 17033) quite coarse pinoid inflorescence hairs and seems to be matched by *Pereira 10161* (Minas Gerais).

MICONIA POEPPIGII Triana

M. congesta Cogn., Fedde Rep. 8: 2. 1910.

M. darienensis Pittier, Contr. U. S. Nat. Herb. 18: 248. 1917.

M. surinamensis Gleason, Rec. Trav. Bot. Néerl. 32: 212. 1935.

The branchlet quadrangulation, pubescence quantity on the branchlets, leaves, and inflorescences, and pedicel length vary in a continuous spectrum and there are no floral differences in the synonyms suggested above; the stamens and style of *Pittier 5478* are glabrous (mildew-ridden, however) and the hypanthium is sparsely stellulate-puberulous. The inclusive species ranges from Guatemala (Izabal, *Jones et al 3026* and *3235*) and Panama (Darien) to Colombia (Santander, *Romero Castañeda 4852* and *4953*; Meta, *Philipson et al 1468*; Chocó, *Duke 11593*; Vaupés, *Schultes & Cabrera 19639*, *Schultes, Baker, & Cabrera 18048*, *Molina & Barkley 18Va022*, *Garcia-Barriga 13882*; Amazonas, *Schultes 8210*), Venezuela (Apure, Amazonas, Bolívar), Suriname, French Guiana (*Irwin et al 48461*; *Melinon s. n.*, distributed as *M. melinonis* and as Macbride photo 17108), Brazil (Amapá, *Pires et al 51284*; Amazonas, *Ducke 1276*, *Krukoff 6324*, *6822*, and *7933*, *Aluisio 187*, *Froes 26141*; Maranhão, *Froes 1973*, distributed as *M. pyrifolia*; Rondonia, *Prance et al 6288* and *6552*), Peru (Loreto), and Bolivia (Pando, La Paz). Gleason (Flora of Peru, p. 440 ex Macbride) had already (and correctly) included *M. congesta* in the synonymy of *M. poeppigii*, but incorrectly included *M. darienensis* under *M. prasina* (Sw.) DC. (Flora of Panama, p. 290). *Miconia pyrifolia* Naud. (vide infra) differs from *M. poeppigii* in the generally larger leaves with broader bases, promptly glabrate stems, glabrous hypanthia, short styles, and non-expanded stigmas.

MICONIA PYRIFOLIA Naudin

The type collection of *M. pyrifolia* (*Blanchet 3412*) shows shortly plinerved leaves and calyx limb more-or-less (albeit slightly) regularly lobed; unfortunately for better evaluation, no recent Bahia collections seem to exist. The Riedel Manaos collections referred to *M. pyrifolia* by Cogniaux have calyces closed in bud, breaking into 3-4 ovate segments at anthesis. A large series of recent Brazilian collections (many from the recent Royal Society Expedition to Mato Grosso and several from N. Y. Botanical Garden trips to Serra do Roncador; *Prance et al 2211*, Manaos-Itacoatiara Highway and *Prance et al 8222*, Labrea, both Amazonas; *Prance et al 9865*, Auaris, Roraima) and several Venezuelan collections (*Steyermark 94169*, Bolívar; *Berti 460* and *624*, Delta Amacuro) are conspecific with the Riedel specimens and will be treated as *M. pyrifolia* for the Flora de Venezuela.

Miconia phaeophylla Triana resembles *M. pyrifolia* vegetatively but lacks interpetiolar ridges on the branchlets, has persistently stellulate-puberulous branchlets and hypanthia, and shows regularly lobed calyces (obvious in bud) and smaller costate fruit; the first Central American collections of *M. phaeophylla* known to me are (all Prov. Panama, Panama) *Ebinger 395*, *Dwyer & Hayden 8053*, and *Dwyer & Stimson 8059* (the latter two distributed as *M. hondurensis* Donn. Sm.). Another simulator of both *M. phaeophylla* and *M. pyrifolia* is *M. kappleri* Naudin, with quite fine (areoles 0.3 mm or less, rather than 1-2 mm) veinlet reticulation on the lower leaf surfaces (but rather persistently stellulate-puberulous hypanthia, truncate or shallowly undulate-lobed calyx limb, and basally nerved leaves). Currently I am uncertain as to the true identity of the recent Suriname collections referred to *M. kappleri*, as well as several Reserva Florestal Ducke (Amazonas, Brazil) specimens; these collections are perhaps best regarded as glabrate forms of *M. phaeophylla*, with true *M. kappleri* (except for the type ?, not cited in the Flora of Suriname, the locality "fl. Carouany" not in the current gazetteers) restricted to French Guiana (*Wachenheim 137*; *Aubreville 248*).

Miconia cinnamomifolia (DC.) Naud. is exceedingly close to *M. pyrifolia*, but has well-developed interpetiolar flaps (rather than just a ridge) and smaller petals and anthers. The holotype (G-DC) of *M. martiusiana* DC. (see Gleason photo 46-2) has been examined and does not differ from other material of *M. cinnamomifolia*. Anthers were seen by de Candolle for *M. martiusiana*, but not for *Cremanium cinnamomifolium*; despite the relative inadequacy of the type, it seems best to use the better-known name *M. cinnamomifolia* for this southeast Brazilian species (which is sympatric with and apparently more common than *M. pyrifolia* in Bahia). The Amazonian collections referred to *M. martiusiana* by Cogniaux are probably all conspecific with the Riedel collections (vide supra) of *M. pyrifolia*.

MICONIA CARASSANA Cogn.

M. compacta Gleason, Bull. Torrey Club 58: 230. 1931.

M. semota Mgf., Notizbl. Bot. Gart. Berlin 12: 177. 1934.

The Martius holotype (M), originally annotated "*Melastoma carassana*", had a subsequent note by Chamisso: "Hoc specimen non est *M. carassana*"; Schrank & Martius's MSS name was cited by Cogniaux (and earlier by de Candolle as *Clidemia carassana*) in the synonymy of *Leandra carassana* (DC.) Cogn. Obviously this purported duplicate is the result of a label mixup between Martius's Minas Gerais and Amazon valley collections since the holotype of *L. carassana*, a well-known species from the Brazilian Planalto, is quite different. Thus *M. carassana*, known from southern Venezuela (Amazonas), Colombia (Vaupés), Ecuador (Napo-Pastaza), Peru (Loreto), and Brazil (Amazonas) joins the long series of plant species with geographically misleading epithets. The synonymy of Markgraf's name was noted earlier by Gleason (Bull. Torrey Club 72: 477. 1945).

A very close relative of *M. carassana* is *M. cinchonaefolia* DC., described 59 years previously; that species, still known to me only from the Martius holotype (M), also has sparsely glandular-puberulous filaments and style and the anther connective bases densely beset with sessile glands, as well as the calyx limb entire in bud but splitting into segments at anthesis, but larger plinerved leaves. Indeed, the Manacurú specimen may yet prove to represent a minor foliar aberrancy. In foliar form

and primary venation, M. cinchonaefolia resembles M. phanerostila Pilger; that species, known from several recent Brazilian collections by Prance and his colleagues, has finer foliar pubescence (stellate hairs 0.3-0.5 mm diam. rather than 1-1.3 mm) and smaller granulose (rather than smooth) petals (isotype, G-DEL).

MICONIA BOXII Wurdack, sp. nov.

Sect. Amblyarrhena. M. ferreyrae Wurdack affinis, pubescentia pinoidea foliis 5-nervatis brevioribus calycis dentibus exterioribus manifestis ovarii apice 8-alato in collo circum stylum protracto differt.

Rami obscure rotundato-quadrangulati (nodis paulo incrassatis) demum teretes, sicut foliorum costa supra et venae primariae subtus inflorescentiaque modice vel sparse pilis pinoideis 0.1-0.2 mm longis demum caducis armati. Folia sessilia; lamina 5.5-1 X 2-3.5 cm oblongo-lanceata apice gradatim acuminato basi paulo (0.2-0.5 cm) cordata, subrigida et obscurissime serrulata, utrinque in nervulis superficieque maturitate glabra, 5-nervata nervis secundariis ca. 1.5-2 mm inter se distantibus supra crebre insculptis subtus crebre elevatis nervulis subtus planis laxiuscule reticulatis areolis ca. 0.7-1 mm latis. Panicula multiflora 6.5-8 X 4-8 cm; flores 4-meri sessiles in ramulorum brevium apicibus 3-5(-7)-aggregati, bracteolis ca. 1 mm longis anguste oblongis vel lanceatis subpersistentibus. Hypanthium (ad torum) 2.2 mm longum extus obscure furfuraceum; calycis tubus 0.2-0.3 mm altus, lobis interioribus semicircularibus ca. 0.6 mm altis, dentibus exterioribus crassis lobos interiores aequantibus vel paulo brevioribus; torus intus glaber. Petala 3 X 1.6 mm glabra paulo pruinosa obovato-oblonga apice rotundato. Stamina isomorphica glabra; filamenta 2-2.1 mm longa; antherarum thecae 4-loculares 1.7-1.9 X 0.4 X 0.5 mm oblongae apice dorsaliter curvato minute uniporoso, connectivo nec appendiculato nec prolongato. Stigma truncatum non expansum; stylus 6 X 0.25 mm glaber in ovarii apice immersus; ovarium 4-loculare 2/3 inferum glabrum apice valde 8-alato.

Type Collection: H. E. Box & A. Alayon V. 3745 (holotype BM; isotype VEN), collected on wooded slopes below Páramo de la Negra, Edo. Tachira, Venezuela, elev. ca. 2600 m, 22 March 1947. "Shrub 2-2.5 m high."

The suggested Peruvian relative has evanescent appressed-stellate pubescence, much longer (15-25 cm) leaves, external calyx teeth completely adnate and essentially indistinguishable, and a truncate ovary apex. In pubescence type and floral details, M. albertii Gleason is closely related, but has distinctly petiolate plinerved leaves with cuneate to obtuse bases. It is curious that the same region (Tachira) has also another sessile-leaved species of the same section (in press, based on Steyermark, Dunsterville, & Dunsterville 100904 and 98698), but with pedicellate 5-merous flowers. Pittier had indicated (in herb.) M. boxii as an undescribed species, but

never published on it.

MICONIA SPINULOSA Naudin

For the Venezuelan flora, Gleason's treatment of this complex (Phytologia 3: 347-349. 1950) is generally being followed, with *M. inaperta* Naudin being included under *M. spinulosa* (free petioles slightly longer) and *M. aegrotans* Naudin under *M. ulmarioides* Naudin. Another synonym of *M. spinulosa* is *M. octoscenidium* Cogn. (isotypes BR, W), varying only in the leaf shape (relatively wider, narrowly obtuse rather than acute at the base). Certainly serrulation and bullation of the leaves and size of the flowers are too variable to permit specific recognition. I have seen no material of *M. spinulosa* var. *subintegrifolia* Cogn. The only extra-Venezuelan collection of *M. spinulosa* known to me is *Seifriz 80* (US), from Mount San Lorenzo near Santa Marta, Colombia. I am by no means satisfied with the specific treatment for this complex.

Cogniaux included in this species-group *M. barbeyana*; Gleason had already noted that the holotype showed 5-merous flowers and actually the species seems to be a small-flowered relative of *M. terera* Naudin. Gleason later added to the group *M. albertii* Gleason (now known from Norte de Santander, Santander, Boyacá, and Cundinamarca) and *M. prasinifolia* Gleason; the latter, at least as to one paratype (*Killip & Hazen 10136*, in very young bud, erroneously cited in the original description as *Killip & Smith 10136*) does not seem at all related to the *M. spinulosa* complex and is perhaps a species of *Clidemia* (but bearing a strong resemblance vegetatively to *Leandra consimilis* Gleason). Two additional species (vide supra; one in press) are being added to the complex by me. The recently described *M. nubicola* Proctor is also surely a part of the alliance and reemphasizes the curious direct phytogeographic linkage of Jamaica with the Venezuelan Cordillera Costal.

Leandra ossaeoides (Naud.) Cogn. bears a remarkable resemblance to the *M. ulmarioides*-*M. arbutifolia* group, differing obviously only in the lanceate acute petals (3.8 X 0.9 mm). In Naudin's original description, the flowers were noted as variable but usually 5-merous and the ovary 3-celled. Examination of three isotypes (BM, LE, P) showed all of the mature flowers with 4 petals, but dissection difficulties hindered accurate determination of ovary-cell number. One modern collection, *Steyermark & Rabe 97396* (Boconó-El Batatal, Trujillo, Venezuela) matches well vegetatively *Funck & Schlim 747*, but the buds have obtusish petals and the ovary is definitely 4-celled. For the Flora de Venezuela, the species has been retained in *Leandra* with misgivings.

CATOCORYNE LINNAEOIDES Hook. f.

This monotypic genus has long been known only from the Lobb holotype (K) from "Peruvia." An overlooked collection, originally determined by K. Rechinger, is *Lehmann s. n.* (W),

collected "an Erdabbrüchen über Pilenan auf 1000 m am Wege von Barbacoas nach Pasto in Colombien, 16 Juli 1879" ("Blümen rosa"). Thus the type is probably another of the Lobb misdirections indicated by Killip (Smiths. Misc. Coll. 87, 1: 1-13. 1932). Unfortunately no listing of "Pilenan" could be found in the standard gazetteers; Lehmann's field notes (typescript copy, US) are of no help, the first Colombian collection entered there being in June, 1880.

CLIDEMIA RUDDAE Wurdack, sp. nov.

C. submontanae Rose ex Gleason et C. laxiflorae (Schlecht.) Walp. affinis, foliis minoribus non acuminatis calycis dentibus exterioribus brevioribus differt.

Ramuli teretes sicut petioli inflorescentiae ramique pilis laevibus gracilibus erectis 2-3 mm longis modice induti pilis brevioribus laevibus glanduliferis sparse intermixtis et sicut foliorum venae primariae subtus hypanthiaque pilis stellulatis vel barbellatis usque ad 0.5 mm longis sparsiuscule vel modice puberuli. Petioli (2-)4-8 cm longi; lamina (4-)6-10 X (3-)4-6.5 cm subrotundo-ovata apice late acuto basi rotundata vel paulo (0.4 cm) cordata, membranacea et ciliolato-serrulata dentibus ca. 0.5-1 mm profundis, supra pilis laxis laevibus ca. 2-2.5 mm longis modice armata, subtus pilis laevibus gracilibus laxis ca. 1-1.5 mm longis densiuscule puberula, 7-nervata nervis secundariis 2-3 mm inter se distantibus nervulis subtus planis obscuris. Inflorescentia ca. 4-5 X 5-8 cm e basim ramosa ramis divaricatis; flores 5-meri, pedicellis 2-4 mm longis, bracteolis inconspicuis 0.5-1 mm longis persistentibus. Hypanthium (ad torum) 4 mm longum extus pilis gracilibus laevibus 1-1.5 mm longis erectis modice indutum; calycis tubus 0.5 mm longus, lobis interioribus ovato-rotundatis 1.2 mm altis, dentibus exterioribus ca. 0.5 mm eminentibus setuliferis; torus glaber. Petala 5.2-5.5 X 3-3.2 mm glabra obovato-oblonga apice rotundato. Stamina isomorphica glabra; filamenta 2.5 mm longa; antherarum thecae 2.2 X 0.7 X 0.6 mm oblongo-subulatae poro terminali ca. 0.35 mm diam., connectivo ad basim paullulo (0.2-0.3 mm) prolongato exappendiculato. Stigma truncatum non expansum; stylus glaber 6 X 0.3 mm; ovarium 5-loculare 0.8 inferum, apice late conico sparse setuloso setulis glanduliferis 0.15 mm longis; semina numerosa ca. 0.9 X 0.4-0.5 mm muriculata.

Type Collection: J. J. Wurdack 2638 (holotype US 2576250A; isotypes to be distributed), grown at Beltsville, Maryland from seed of Rudd 3019. "Subshrub 0.3 m. Corolla white. Flowering May-August 1970."

Paratypes (both Nayarit, Mexico): Velva E. Rudd, Patricia M. Bauer, & Adrien C. Fox 3019, collected on north slope of pine-oak forest between Tepic and Sta. Isabela, at turnoff to La Mojonera, elev. 1150 m, 13 Dec. 1968. "Low shrub with blue berries"; R. McVaugh & J. Sooby Jr. 13370, from "rocky hills in oak forest 5 miles southeast of San Leonel (ca. 20 miles SE of Tepic)," elev. ca. 1250 m, 6 Oct.1952

"Small shrub to 25 cm long, occasional, only in crevices of shaded rocks."

Clidemia submontana has all the cauline and hypanthial hairs at least basally roughened, shorter hairs on the lower leaf surfaces (averaging less than 1 mm long), and very shortly pedicellate larger (petals 9-10 mm long) flowers with external calyx teeth projecting 3.5-5 mm; an excellent series of this species has recently been collected by McVaugh in Nayarit (*18843*) and Jalisco (*15993*, *20311*). *Clidemia laxiflora* has inflorescence and hypanthial pubescence less than 1 mm long, external calyx teeth projecting ca. 2 mm, and anthers only 1.5-1.7 mm long; the Guatemalan collections ascribed to this species are probably not conspecific with those from Vera Cruz (Mexico). Probably also at least some subspecific differentiation is needed in *C. petiolaris* (S. & C.) Schlecht. ex Triana, sensu the Flora of Guatemala; that widespread complex differs from *C. ruddae* in the absence of underlying stellulate and pinoid hairs on the stems and inflorescences, as well as in the 5-nerved acuminate leaf blades. The general aspect of *C. ruddae* is somewhat like that of *Miconia saxicola* Brandegee, which however differs at least in the much shorter cauline, foliar, and hypanthial pubescence as well as the considerably larger flowers. The two collections of *C. ruddae* from the wild are both fruiting, so the cultivated (for chromosome number) flowering material was chosen as the type; the species has been named in recognition of the well-known feminine student of Leguminosae, not the Columbia University male dissident.

CLIDEMIA ALLARDII Wurdack

Poeppig 1794 (W) from Tocache, Peru, was cited by Triana as *Calophysa tococoidea* DC. "forma hirsutior" and by Cogniaux as *Maieta tococoidea* (DC.) Cogn. The Poeppig specimen actually represents *C. allardii* and thus *C. tococoidea* (DC.) Gleason may be eliminated from the Peruvian flora.